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EXAMINER

CHAKRABORTY, SUPRATIK

ART UNIT PAPER NUMBER

2628

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Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---|--------------------------------------|--|
| Office Action Summary | Application No. 10/791,965 | Applicant(s) KRAMER ET AL. | |
| | Examiner Supratik Chakraborty | Art Unit 2628 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16,20-54 and 56-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16,20-54 and 56-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-22,23-40,41,42, and 43 are rejected under 35 U.S.C. 101 because
the claimed invention is directed to non-statutory subject matter.

Even when a claim applies a mathematical formula, for example, as part of a seemingly patentable process, ensure that it does not in reality “seek[] patent protection for that formula in the abstract.” Diehr, 450 U.S. at 191, 209 USPQ at 10. The preamble mentions a system while the applicant is claiming a ‘software’ that corresponds to the ‘formula in the abstract’ as said in the interim guidelines (page 23, paragraph 1, lines 1-4) and as such is not patentable.

Similarly, computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer that permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer

Art Unit: 2628

which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

Therefore the word 'software' should be replaced with 'computer program tangibly embodied in a computer readable medium.'

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 20, 23,24,27-32,34,41,44,47-53,58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent#: 6,556,201) further in view of Hirano (Patent#: 6,885,408) and further in view of Rosenholtz et al (6,883,138).

Regarding Claim 1, Maehara et al teach the following limitations of the claim:

A system for rendering at least one image interactive from the point of view of a user (col.2; lines 59-67), the system comprising:

- (1) Software for delivering each image layer sequentially to a display device capable of displaying the at least one image layer (col. 3, lines 41-44). The reference teaches about moving images, which in order to be shown, needs to be displayed sequentially.
- (2) Software for displaying each image layer such that only one image layer is the currently viewable image layer from the point of view of the user at any given time (col.4, lines 5-15).
- (3) Software for enabling the at least one interactive function with respect to the at least one image, so that the user perceives the illusion of movement in two dimensions or three dimensions (col.2, lines 59-61).

Except,

- (4) Software for processing the at least one image so that one image layer is provided for each of the at least one images.

Hirano teaches the above limitation in (col.2, lines 16-22).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the image rendering technique as taught by Maehara et al., the providing of the image layer as taught by Hirano in order to adjust image quality by performing adaptive image processing according to the status of the image layer. The combination of Maehara et al and Hirano address the limitation of the claim except the software for providing a transparent layer that overlies the currently viewable image layer whereby the transparent layer is not perceptible from the point of view of the user.

Rosenholtz et al teach the above limitation in (col.11, lines 50-55):

Other transformations are also possible. For example, a color wash may be applied. A color wash is any change in color applied throughout the image, e.g. through the overlay of a transparent layer on the image such that the original image remains visible but the color of the image as a whole has been modified by the color of the overlay.

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al and Hirano the providing of the transparent layer as taught by Rosenholtz et al so that the original image remains visible but a change of color can be applied on the image.

Hirano teaches about the various layers within the display section such as the OSD layer, character layer, still image layer (col.2, lines 38-41). These layers occupy various positions on the display. Hirano also teach about the layer image signal generating means that process layers for each of these sections (col.2, lines 42-45). Therefore this corresponds to the claimed interactive function that provides mobility to the layers.

Therefore one might use Hirano's teachings to move both the transparent and the viewable image layer from one portion to the other as claimed in order to have image processing capabilities for the various portions of the image.

Regarding Claim 2, Maehara et al. further teach at least one image comprises a plurality of images of at least one object wherein each image represents a view of the at least one object that is captured at a different angle with respect to the at least one object (col.2, lines 5-9).

Regarding Claim 3, Maehara et al. teach that at least one image comprises a plurality of images of at least one object wherein each image represents a view of the at least one object that was captured at a different angle in a particular plane of the at least one object (col.2, lines 6-9).

Regarding Claim 4, Maehara et al teach that each image in the plurality of images represents a view of the at least one object that is captured at a different angle in a particular plane of the at least one object through 0 to 360 degrees or some fraction thereof (col.9, lines 46-49).

Regarding Claim 5, Maehara et al. teach that the software for enabling the at least one interactive function causes the software for displaying each image layer to

sequentially display each image layer as the currently viewable image layer to provide the illusion of movement in three dimensions (col.9, lines 23-27).

Regarding Claim 6, Maehara et al. teach that the software for enabling the at least one interactive function accepts input from the user that controls the degree to which the user perceives the illusion of movement in three dimensions (col.30, lines 15-25).

Regarding Claim 20, Claim 20 is similar in scope to claim 1 and is thus rejected under the same rationale.

Regarding Claim 23, Claim 23 is similar in scope to claim 1 and is thus rejected under the same rationale.

Regarding Claim 24, Maehara et al teach that plurality of images are digital images (col.4, lines 5-8).

Regarding Claim 27, Hirano teaches the software for controlling the display provides each image in a separate layer, and only one such image layer is viewable by a user at any given time (col.2, lines 38-45).

Regarding Claim 28, Maehara et al teach that the plurality of images further comprise different images of the at least one object which are captured in at least one plane of the object through 0 to 360 degrees or some fraction thereof (Fig.11).

Regarding Claim 29, Maehara et al teach that the software for the interactive function simulates the rotation of the object through three dimensions by sequentially first displaying and then hiding each image layer to the user at discrete increments of time (col.30, lines 14-23). Although the reference doesn't mention the hiding of each image layer, it does teach the changing of the virtual viewpoint that will change the orientation of the object in question by not revealing all the aspects of the object that is being photographed.

Regarding Claim 30, Maehara et al teach that the discrete increments of time are capable of being specified by the user (col. 30, lines 24-25).

Regarding Claim 31, Maehara et al teach that the plurality of images further comprise different images of the at least one object which are captured in a plurality of planes of the object through 0 to 360 degrees or some fraction thereof (Fig. 11).

Regarding Claim 32, Maehara et al teach that the software for the interactive function simulates the rotation of the object through three dimensions in each of the

plurality of planes by sequentially first displaying and then hiding each image layer to the user at discrete increments of time (col. 30, lines 14-23).

Regarding Claim 34, Maehara et al teach that the software for controlling the display provides each image in a separate layer, each such image layer has approximately the same height and width as every other image layer, and only one such image layer is viewable by a user at any given time (col.9, lines 23-27). The reference teaches about the capture of images by a video camera which stores images on different layers having the same dimensions in order to display the moving image.

Regarding Claim 35, the combination of Maehara et al and Rosenholtz et al teach all the limitations of the claim. The overlaying of the transparent layer is mentioned in Rosenholtz et al (col.11, lines 50-55). Dimensions of the transparent layer are an obvious design preference.

Regarding Claim 41, Claim 41 is similar in scope to claim 1 and is thus rejected under the same rationale.

Regarding Claim 43, Claim 43 is similar in scope to claim 1 and is thus rejected under the same rationale.

Regarding Claim 44, Claim 44 is similar in scope to claim 1 and is thus rejected under the same rationale.

Regarding Claim 47, Maehara et al teach that the system for capturing at least one image of an object, comprises of:

An image-capturing device having:

An area in which an object can be disposed for imaging, the area having an interior surface and an exterior surface, at least one lens coupled to a camera, the at least one lens being in operable communication with the interior of the area.

Means for commanding the at least one camera to acquire the at least one image of the object via the at least one lens (Fig.11).

Means for delivering the at least one image to a storage device (Fig.4).

The rest of the limitations are similar in scope to claim 1 and are thus rejected under the same rationale.

Regarding Claim 48, Maehara et al teach that the interior surface is cylindrically shaped (Fig.11).

Regarding Claim 49, Maehara et al teach that the interior surface is cylindrically shaped in (Fig.11). It would be an obvious design preference if the inventor decided to change the interior surface into an spherically shaped entity.

Regarding Claim 50, Maehara et al teach that the system for capturing at least one image of an object and rendering the at least one image capable of being interacted with by a user, comprising of an image-capturing device comprising:

An approximately cylindrically shaped barrel having an exterior surface and an interior surface, the interior surface defining an interior aperture in which an object can be situated.

At least one lens associated with and in operable communication with at least one camera, the at least one lens exposed to the interior aperture.

Means for commanding the at least one camera to acquire the at least one image of the object via the at least one lens (Fig.11).

Means for delivering the at least one image to a storage device (Fig.4).

Software associated with and in operable communication with the storage device which is capable of controlling the display of the at least one image such that only one of the at least one images is perceivable by a user.

Software associated with and in operable communication with the storage device, which is capable of enabling at least one interactive function to be carried out with respect to at least one image, whereby the at least one interactive function will give the user the illusion that the object is moving on the display (col.2, lines 58-62).

A processor on which the software for controlling the display and the software for enabling the at least one interactive function can be implemented (Fig.4).

The rest of the limitations are similar in scope to claim 1 and are thus rejected under the same rationale.

Regarding Claim 51, Claim 51 is similar in scope to claim 47 and is thus rejected under the same rationale.

Regarding Claim 52, Maehara et al teach that the system for capturing a plurality of images of an object, comprises of an image-capturing device having:

- (1) An area in which an object can be disposed for imaging, the area having an interior surface and an exterior surface (Fig.11).
- (2) At least one lens coupled to a camera, the at least one lens being in operable communication with the interior of the area (Fig. 11).
- (3) Means for commanding the at least one camera to acquire a first image of the object via the at least one lens (Fig.11).
- (4) Means for moving the at least one camera relative to the object (Fig.12).
- (5) Means for commanding the at least one camera to acquire a second image of the object via the at least one lens (col.36, lines 46-57).
- (6) Means for delivering the first image and the second image to a user (Fig.9).

The rest of the limitations are similar in scope to claim 47 and are rejected under the same rationale.

Regarding Claim 53, Maehara et al teach that the means for moving the camera relative to the object as images in the set of images are captured is software that controls movement of the lens (col.20, lines 24-34).

Regarding Claim 58, Claim 58 is similar in scope to claim 1 and is thus rejected under the same rationale.

Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent#: 6,556,201) further in view of Hirano (Patent#: 6,885,408) and further in view of Rosenholtz et al (6,883,138) as applied to claim 23 and further in view of Ange (Patent#: 6,121,963).

Regarding Claim 25, Maehara et al teach all the limitations except the language of the software is dynamic hypertext mark up language.

Ange teaches the above limitation in (col.5, lines 26-32).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the invention of Maehara et al the using of Dynamic Hypertext Markup Language as the language of the software since Dynamic Hypertext Markup Language possesses the ability to layer images on top of other images.

Regarding Claim 26, Ange further teach that the language of the software is a combination of dynamic hypertext mark up language and JAVASCRIPT (col.5, lines 26-33).

Claims 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent#: 6,556,201) and further in view of Gulick, Jr. et al. (Patent#: 6,373,637).

Regarding Claim 54, Maehara et al teach all the limitations of the claim except the means for delivering the at least one image to a lenticular sheet.

Gulick, Jr. et al teach the above limitation in (col.5, lines 44-50).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the invention of Maehara et al the means for delivering the image to a lenticular sheet as taught by Gulick, Jr. et al in order to have the viewer see an image sequence that varies when the viewer changes the position of the image by applying pressure or moving their head relative to the image.

Gulick, Jr. et al teach that a lenticular sheet on which a plurality of images of an object have been deposited on a plurality of lenticular lenses, whereby a user is provided with the illusion of movement when pressure is applied to different portions of the lenticular sheet (col.5, lines 1-7).

as successive line of data under each lenticule, many different frames can be viewed at different viewing locations, each lenticule projects a different line of data as the viewer location changes relative to the image, successive image lines are projected by each lenticule thus providing different image frames to the viewer. The result is the viewer sees a look-around stereoscopic image sequence as they move their head left to right relative to the lenticular image.

The pressure applied to the lenticular image can change the position of the sheet relative to the head in order to provide the viewer with an illusion of movement as claimed.

Claims 7,15,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent #6,556,201) and further in view of Hirano(Patent #6,885,408) and further in view of Rosenholtz et al (6,883,138) as applied to claims 1-6,23,24,27-32,34,41,44,47-53 above, and further in view of Smilansky et al(Patent # 6,323,856).

Regarding Claim 7, the combination of Maehara et al and Hirano teach all the limitations except that the interactive function accepts input from the user that controls the degree to which and the speed with which the user perceives the illusion of movement in three dimensions.

Smilansky et al teach the above limitation in (col.4, lines 27-35).

Therefore it would have been obvious to one of ordinary skill in the to apply within the combination of Maehara et al. and Hirano, the interactive function to control the speed of the movement as taught by Smilansky et al in order to have a means for controlling the speed and movement in a continuous realistic computer graphic.

Regarding Claim 15, Smilansky et al further teach that the interactive function causes the software for displaying each image layer to move the currently viewable image layer from a first position on the display to a second position on the display (col.3, lines 61-67). The reference teaches various image transformation techniques

such as shift transformations, rigid transformations and transformations carried out as a result of camera movements.

Regarding Claim 36, Smilansky et al. teach that the interactive function enables the at least one object in the set of images to be moved in the horizontal, vertical or diagonal directions on the display (col.3, lines 61-67).

Claims 8 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent #6,556,201) and further in view of Hirano(Patent # 6,885,408) and further in view of Rosenholtz et al (6,883,138) as applied to claims 1-6,23,24,27-32,34,41,44,47-53 above, and further in view of Robotham et al(Patent # 6,084,590).

Regarding Claim 8, the combination of Maehara et al and Hirano teach all the limitations except that the interactive function causes the software for displaying each image layer to increase the resolution of the currently viewable image layer.

Robotham et al teach the above limitation in (col.8, lines 33-41).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al and Hirano the interactive function that causes the software for displaying each image layer to increase the resolution of the currently viewable image layer in order to generate images of higher quality and resolution while maintaining interactivity of the user with the image.

Regarding Claim 45, Robotham et al teaches the limitation in (col.8, lines 33-41).

Claims 9 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent #6,556,201) and further in view of Hirano(Patent # 6,885,408) and further in view of Rosenholtz et al (6,883,138) as applied to claims 1-6,23,24,27-32,34,41,44,47-53 above, and further in view of Motoshima et al(Patent # 6,271,806).

Regarding Claim 9, the combination of Maehara et al and Hirano teach all the limitations of the claim except that the interactive function causes the software for displaying each image layer to increase the resolution of the currently viewable image layer by increasing the size of the currently viewable image layer by equal amounts in the horizontal direction and in the vertical direction.

Motoshima et al addresses the above limitation in (col.2, lines 51-63).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al and Hirano the increasing the resolution by increasing the size as taught by Motoshima et al in order to have a bigger and better picture since a higher resolution results in a greater number of pixels.

Regarding Claim 42, the combination of Maehara et al and Hirano teach all the limitations of the claim except that the software associated with and in operable

communication with the set of images which enables at least one interactive function to be carried out with respect to the set of images whereby the interactive function will give the user the illusion that the object is increasing in size on the display.

Motoshima et al teach the magnification of images in (col.2, lines 51-63).

Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent # 6,556,201) and further in view of Hirano(Patent # 6,885,408) and and further in view of Rosenholtz et al (6,883,138) as applied to claims 1-6,23,24,27-32,34,41,44,47-53 above, and further in view of Haeberli (Pub#: 2003/0065590).

Regarding Claim 10, The combination of Maehara et al and Hirano teach all the limitations of the claim except that the interactive function causes the software for displaying each image layer to increase the resolution of the currently viewable image layer and the size of the adjustable border of the viewing area.

Haeberli teach the above limitation in (Page 9, [0100]).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al and Hirano, the display of the increased resolution and the size of the adjustable border as taught by Haeberli to display a delineated preview image.

Regarding Claim 14, Claim 14 is similar in scope to claim 10 and is thus rejected under the same rationale.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent # 6,556,201) and further in view of Hirano(Patent # 6,885,408) and and further in view of Rosenholtz et al (6,883,138) and further in view of Haeberli (Pub#: 2003/0065590) as applied to claim 10 above, and further in view of Robotham et al(Patent # 6,084,590).

Regarding Claim 11, the combination of Maehara et al , Hirano, Rosenholtz et al and Haeberli doesn't teach the claimed limitation of increasing the resolution. Robotham et al teaches the above limitation in (col.8, lines 33-41).

Therefore it would have been obvious to one ordinarily skilled in the art to apply within the combination of Maehara et al, Hirano, Rosenholtz et al and Haeberli the interactive function that causes the software for displaying each image layer to increase the resolution of the currently viewable image layer in order to generate images of higher quality and resolution while maintaining interactivity of the user with the image.

Claims 16 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent #6,556,201) and further in view

of Hirano(Patent #6,885,408) and further in view of Rosenholtz et al (6,883,138) as applied to claims 1-6,23,24,27-32,34,41,44,47-53 above, and further in view of Moe (Pub #: 2001/0029829).

Regarding Claim 16, the combination of Maehara et al and Hirano teach all the limitations of the claim except that the system further includes a software for displaying a tool bar layer in which a tool bar is disposed, wherein the tool bar layer is perceptible from the point of view of the user along with the currently viewable image layer.

Moe teaches the above limitation in (Page 3, [0021]).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al and Hirano, the display of toolbar as taught by Moe in order to use it for controlling and monitoring the displayed material.

Regarding Claim 33, Claim 33 is similar in scope to claim 11 and is thus rejected under the same rationale.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent # 6,556,201) and further in view of Hirano(Patent # 6,885,408) further in view of Rosenholtz et al (6,883,138) and further in view of Haeberli (Pub # 2003/0065590) as applied to claim 10 above, and further in view of Robotham et al (Patent# 6,323,856).

Regarding Claim 12, the combination of Maehara et al, Hirano, Rosenholtz et al and Haeberli teach all the limitations of the claim except that the interactive function causes the software for displaying each image layer to increase the resolution of the currently viewable image layer by increasing the size of the currently viewable image layer by equal amounts in the horizontal direction and the vertical direction.

Robotham et al mentions the above limitation in (col.8, lines 33-41)

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al, Hirano and Haeberli, the interactive function that causes the software for displaying each image layer to increase the resolution of the currently viewable image layer in order to generate images of higher quality and resolution while maintaining interactivity of the user with the image.

Regarding Claim 13, Robotham et al teach about the resolution in (col.8, lines 34-41).

Claims 21,22,37-39 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent # 6,556,201) and further in view of Hirano(Patent # 6,885,408) and further in view of Rosenholtz et al (Patent # 6,883,138) as applied to claims 17,20 and 35 above, and further in view of Echerer et al (Patent #: 5,740,267).

Regarding Claim 21, the combination of Maehara et al, Hirano and Rosenholtz et al teach all the limitations of the claim except that a line is drawn on the second transparent layer which corresponds to the distance between the first position and the second position.

Echerer et al teach the above limitation in (col.15, lines 12-15).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al, Hirano and Rosenholtz et al the drawing of line across the image as taught by Echerer et al in order to do measurements across the image in a visually indicative way.

Regarding Claim 22, Echerer et al further teach that the distance between the first position and the second position corresponds to an actual physical dimension of an object depicted in the at least one image (col.13, lines 27-35).

Regarding Claim 37, Echerer et al teach that the software for interactive function enables the at least one object in the set of images to be zoomed in on to a selected degree (col.11, lines 48-61).

Regarding Claim 38, Echerer et al teach that the selected degree is controlled by a zoom factor (col.12, lines 33-41).

Regarding Claim 39, Echerer et al teach that the dimension of the at least one object in the set of images to be measured and correlated with a corresponding actual physical dimension of the at least one object (col.13, lines 27-35).

Regarding Claim 40, Echerer et al teach that at least one object in the set of images to be moved in the horizontal, vertical or diagonal directions on the display by calculating the difference between a first x coordinate and a first y coordinate on the transparent layer and a second x coordinate and a second y coordinate on the transparent layer and by translating the image layers in the set of images a distance on the display corresponding to the difference (col.12, lines 57-65).

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maehara et al (Patent # 6,556,201) and further in view of Hirano(Patent # 6,885,408) further in view of Rosenholtz et al (Patent # 6,883,138) and further in view of Robotham et al (Patent # 6,323,856) as applied to claims 8 and 45 above, and further in view of Motoshima et al (Patent #: 5,740,267).

Regarding claim 46, the combination of Maehara et al, Hirano and Robotham et al teach all the limitations of the claim except enlarging the image in the at least one image layer that is perceptible to the user enlarges the image to an equal degree in the horizontal direction and in the vertical direction.

Motoshima et al addresses the above limitation in (col. 2, lines 51-64).

Therefore it would have been obvious to one of ordinary skill in the art to apply within the combination of Maehara et al, Hirano and Robotham et al the enlarging of the image as taught by Motoshima et al in order to have a bigger and better picture since a higher resolution results in a greater number of pixels.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 56 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by

Gulick, Jr. et al (Patent# 6,373,637).

Regarding Claim 56, Gulick, Jr. et al teach about a lenticular sheet assembly, the assembly comprising: a support surface layer, a lenticular layer containing a plurality of lenticular lenses on which at least one image has been deposited; means for retaining the lenticular layer on the support surface layer wherein the means for retaining provides a gap between the lenticular layer and the support surface layer (col.6, lines 13-21).

Regarding Claim 57, Gulick, Jr. et al teach that the gap permits relative movement between the lenticular layer and the support surface layer when pressure is applied to the lenticular layer (col.6, lines 16-21).

Gulick et al in Fig.2 illustrates the claimed limitation:

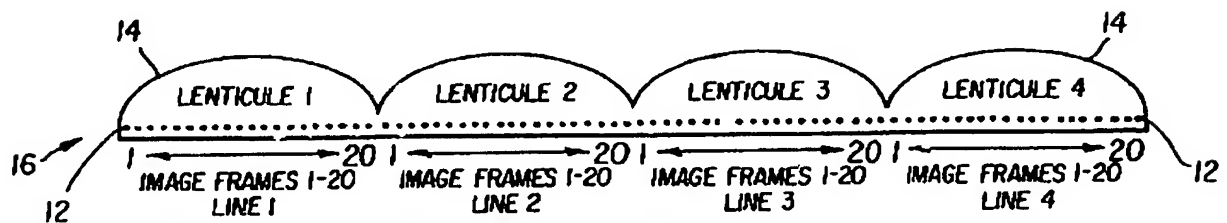


FIG. 2

The claimed 'gap' is present in the above given figure. Pressure applied can cause relative movement between the support system (element 12) and the lenticular layer (element 14) that satisfies the given limitation.

Response to Arguments

Applicant's arguments filed 3/28/2006 have been fully considered but they are not persuasive. In response to applicant's argument that the reference (Gulick, Jr. et al) doesn't teach the means for retaining a lenticular layer that provides a gap between the lenticular layer and a support surface layer for permitting relative movement between the lenticular layer and the support surface when pressure is applied to the lenticular assembly, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Supratik Chakraborty whose telephone number is (571) 272-7662. The examiner can normally be reached on Monday - Friday (7:30 am - 3:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SC
S.Chakraborty
6/5/2006


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER